

AA s2 final hint

Guess & Go (We did not cover this material so you will not be penalized for missing these questions.): (Approx. 7 questions)

(f-g)(x), inference, probability, likelihood,
estimated population, β , z-scores, drug, kind of study,
model predict...

Which properties are used to add these complex numbers? Choose all that apply.

$$(4 + 3i) + (8 + 2i) = (4 + 8) + (3i + 2i) = 12 + 5i$$

- A. Associative property
- B. Commutative property
- ~~C. Distributive property~~
- D. None of the above

For what value of x is the rational expression below undefined?

$$\frac{3x-5}{x-6}$$

+6
←
0

A. -6

B. $-\frac{5}{3}$

C. $\frac{5}{3}$

D. 6

Which of the following statements accurately describes the expression ?

$$\frac{x+5}{x^2-2}$$

- ~~A. The product of $x+5$ and x^2-2~~
- ~~B. The product of x^2-2 and $x+5$~~
- C. The quotient of $x+5$ and x^2-2
- D. The quotient of x^2-2 and $x+5$

A. $(x+5) \cdot (x^2-2)$

C $\frac{x+5}{x^2-2}$

Which of the following expressions are equivalent to ? Choose all that apply.

$$\frac{2}{x^4 - y^4}$$

$$(a^m)^n = a^{m \cdot n}$$

A. $\frac{2}{(x^2)^2 - (y^2)^2}$

B. $\frac{1}{(x^2 - y^2)} \cdot \frac{1}{(x^2 + y^2)}$

C. $\frac{2}{(x^2 - y^2)} \cdot \frac{1}{(x^2 + y^2)}$

D. $\frac{2}{(x^2 - y^2)} \cdot \frac{1}{(x^2 - y^2)}$

50000 enter
x 1.03 enter

A college graduate expects to earn a salary of \$50,000 during the first year after graduation and receive a 3% raise every year after that. What is the total income he will have received after ten years?

50 000
51 500
53 045²
54 636.35
56 274.44
57 963.70
59 702.61
61 493.69
63 338.50
65 238.65
.94

~~A. \$515,000.00~~

~~B. \$507,955.31~~

C. \$573,193.97 ←

D. \$640,389.78

50,000 x 50,000
.03
1500 x 50000
10
15000 x 50000
500000

What are the zeros of the function ?

A. -3, -2

B. -3, 2

C. -2, 3

D. 2, 3

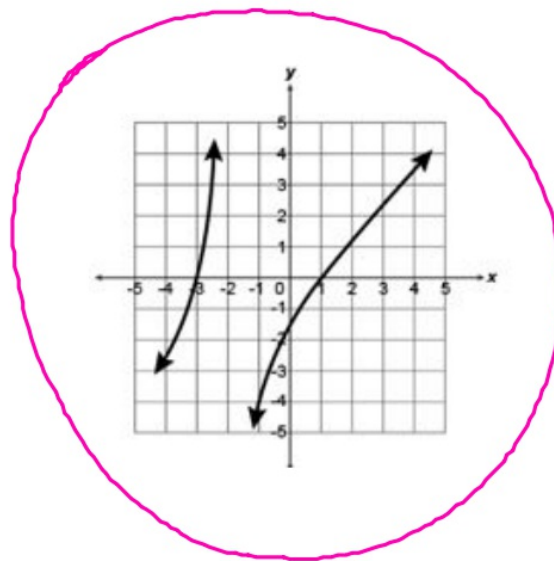
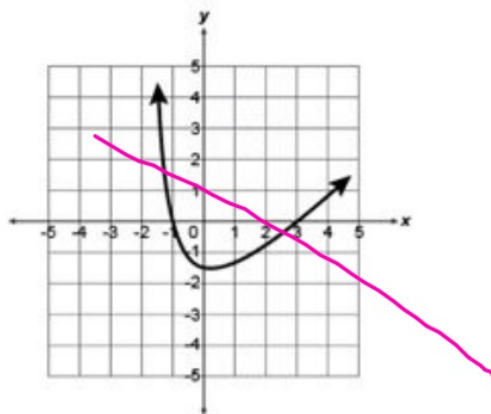
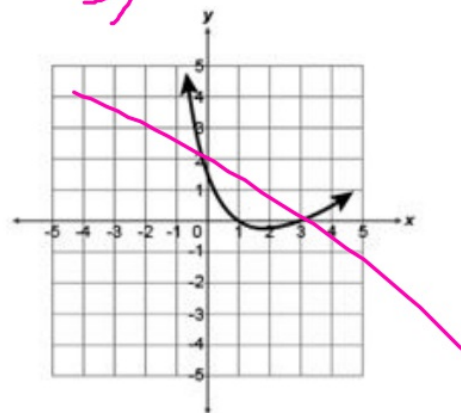
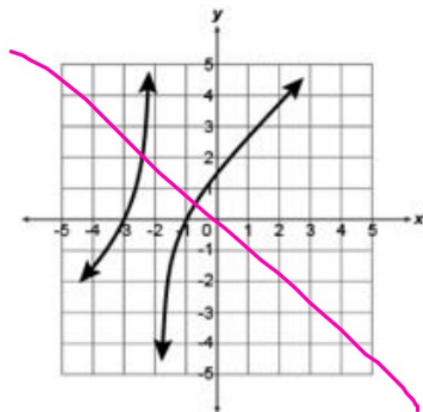
$$f(x) = \frac{x^2 + x - 6}{x^2 - x - 6}$$

$$\rightarrow (x-2)(x+3)$$

Which of the following is the graph

of $f(x) = \frac{x^2 + 2x - 3}{x + 2}$?

undef @ $x = -2$
 $(x-1)(x+3)$ zeroes = $+1, -3$



How much would \$200 invested at 4% interest compounded monthly be worth after 8 years? Round your answer to the nearest cent.

$$A(t) = P \left(1 + \frac{r}{n} \right)^{nt}$$

A. \$322.83

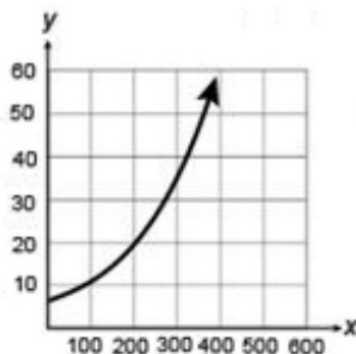
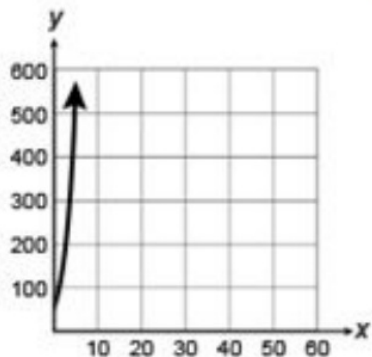
B. \$275.28

C. \$273.71

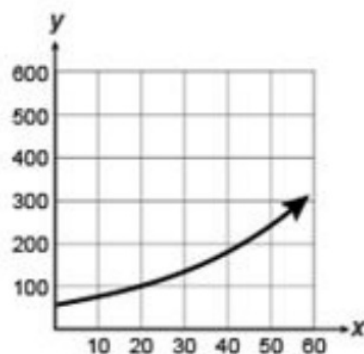
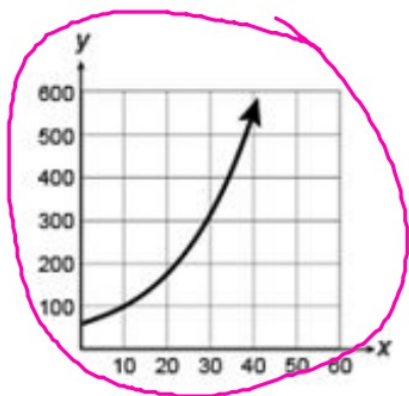
D. \$205.40

$$A(8) = 200 \left(1 + \frac{0.04}{12} \right)^{12 \cdot 8} = \$275.28$$

A herd of bison currently has 55 members. Based on the available resources, biologists estimate that the size of the herd will increase at a rate of 6% per year. Which of the following graphs models this relationship, if the x-axis represents years and the y-axis represents number of bison?



55 enter
 $\times 1.06$ enter
 ,,
 ,,
 ,,



The amount of time t it takes for a group of volunteers to clean up a park varies inversely with the number of volunteers v . If it takes 7 volunteers 1.5 hours to clean up the park, which of the following equations models this situation?

$$t = \frac{5.5}{v}$$

$$t = \frac{8.5}{v}$$

$$t = \frac{10.5}{v} \rightarrow 1.5 = \frac{10.5}{7}$$

$$t = \frac{11.5}{v}$$

What is the solution to $\frac{4}{x-3} + 5 = 2$?

$$\cancel{b} \cdot \frac{a}{\cancel{c}} = \frac{\cancel{a}}{\cancel{c}} \cdot b$$

$$\frac{a}{c} = b$$

$$\frac{4}{x-3} = -3$$

$$3 = \frac{4}{3}$$

$$-\frac{4}{3}$$

$$\frac{5}{3}$$

$$x \approx 1.7$$

$$x = \frac{5}{3}$$

What is the solution to $\sqrt{5x+3} = 3\sqrt{x}$?

$$\sqrt{5x+3} = 3\sqrt{x}$$

$$5x+3 = 9x$$

$$\begin{array}{r} -5x \\ 5x+3 = 9x \\ \hline 3 = 4x \end{array}$$

$$\frac{3}{4} = x$$

$$0.75 = x$$

$$\sqrt{5\left(\frac{3}{4}\right)+3} = 3\sqrt{\frac{3}{4}}$$

$$\sqrt{\frac{15}{4} + \frac{12}{4}}$$

$$\sqrt{\frac{27}{4}}$$

$$\sqrt{\frac{9 \cdot 3}{4}}$$

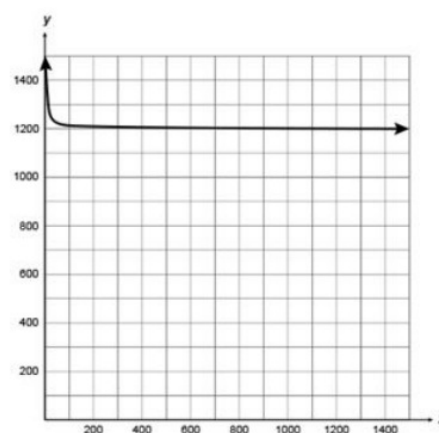
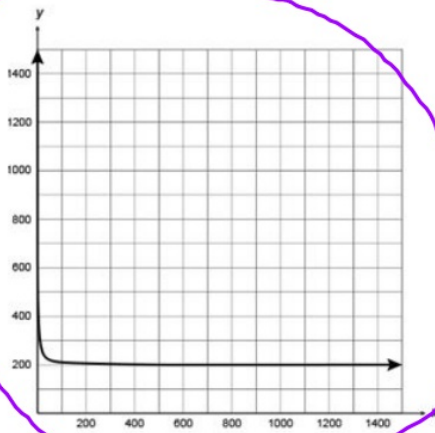
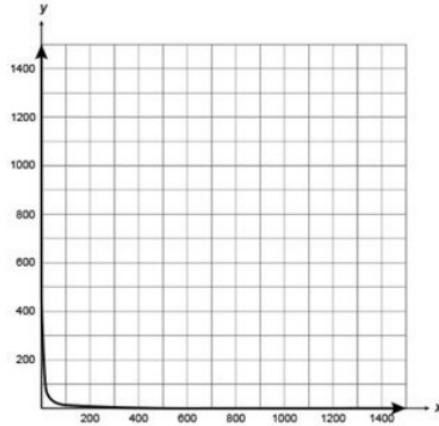
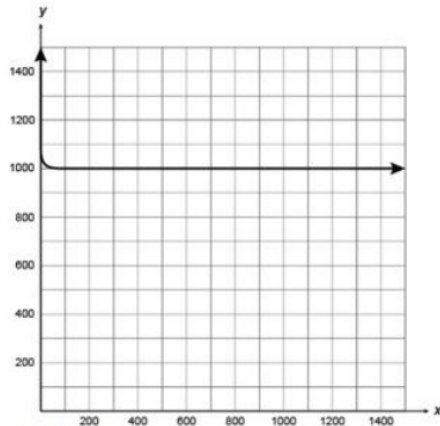
$$3\sqrt{\frac{3}{4}}$$

Solve $\sqrt{x-1} = x-3$.

Check for extraneous solutions.

$$\begin{aligned}\sqrt{x-1}^2 &= (x-3)^2 \\ x-1 &= x^2 - 6x + 9 \\ -x & \quad -x \\ -1 &= x^2 - 7x + 9 \\ +1 & \quad +1 \\ 0 &= x^2 - 7x + 10 \\ &= (x-5)(x-2) \\ x=5, x=2 \\ \sqrt{5-1} &= \sqrt{4} = 2 \\ 5-3 &= 2\end{aligned}$$

The Sumner High School Biology Club is planning a trip to Yosemite National Park. The trip will cost \$200 per club member plus a \$1000 deposit. Which of the following graphs models the total average cost of the trip per club member?



Which of the following statements accurately compares $f(x)$ and $g(x)$? Choose all that apply.

$$f(x) = 40(1.3)^x$$

x	$g(x)$
0	40
1	56
2	78.4
3	109.76

$$\frac{56}{40} = 1.4$$

- ☒ A. The initial values of $f(x)$ and $g(x)$ are the same.
- ☐ B. The growth factor of $f(x)$ is more than the growth factor of $g(x)$.
- ☐ C. ~~The decay factor~~ of $f(x)$ is less than the decay factor of $g(x)$.
- ☒ D. The growth factor of $f(x)$ is less than the growth factor of $g(x)$.